WHAT IS CLAIMED IS:

1. A composition comprising:

(a) a biocompatible polymer;

(b) a biocompatible contrast agent; and

(c) a biocompatible solvent which solubilizes said biocompatible polymer

wherein sufficient amounts of said polymer are employed in said composition such that, upon delivery to a vascular site, a polymer precipitate forms which embolizes said vasculare site; and

further wherein the viscosity of said composition is at least about 150 cSt at 40°C.

2. A composition comprising:

(a) a biocompatible polymer at a concentration of from about 2 to 50 weight percent;

(b) a biocompatible contrast agent at a concentration of from about 10 to about 40 weight percent; and

(c) a biocompatible solvent from about 10 to 88 weight percent

wherein the weight percents of the biocompatible polymer, contrast agent and biocompatible solvent are based on the total weight of the complete composition; and

further wherein the composition has a viscosity of at least about 150 cSt at 40°C.

3. The composition according to Claim 1 or Claim 2, wherein said composition has a viscosity of at least about 200 cSt at 40°C.

4. The composition according to Claim 3, wherein said composition has a viscosity of at least about 500 cSt at 40°C.

5. The composition according to Claim 4, wherein said composition has a viscosity of from about 500 to 5,000 cSt at 40°C.

6. The composition according to Claim 1 or Claim 2 wherein said composition has a migration distance of less than 25 mm.

7. The composition according to Claim 1 or Claim 2, wherein the concentration of biocompatible polymer employed in said composition is from 6 to 50 weight percent.

8. The composition according to Claim 7, wherein the concentration of biocompatible polymer employed in said composition is from 8 to 30 weight percent.

9. The composition according to Claim 1 or Claim 2 wherein said biocompatible solvent is selected from the group consisting of ethyl lactate, dimethylsulfoxide, ethanol and acetone.

10. The composition according to Claim 9 wherein said biocompatible solvent is dimethylsulfoxide.

11. The composition according to Claim 1 or Claim 2 wherein said contrast agent is a water insoluble contrast agent.

12. The composition according to Claim 11 wherein said water insoluble contrast agent is selected from the group consisting of tantalum, tantalum oxide, tungsten and barium sulfate.

13. The composition according to Claim 12 wherein said contrast agent is tantalum.

14. The composition according to Claim 1 or Claim 2 wherein said contrast agent is a water soluble contrast agent.

15. The composition according to Claim 1 or Claim 2 wherein said biocompatible polymer is a non-biodegradable, biocompatible polymer.

16. The composition according to Claim 15 wherein said non-biodegradable, biocompatible polymer is selected from the group consisting of cellulose acetates, ethylene vinyl alcohol copolymers, hydrogels, polyacrylonitrile, polyvinylacetate, cellulose acetate butyrate, nitrocellulose, copolymers of urethane/carbonate, copolymers of styrene/maleic acid, and mixtures thereof.

17. The composition according to Claim 16 wherein said biocompatible polymer is an ethylene and vinyl alcohol copolymer.

18. The composition according to Claim 1 or Claim 2 wherein said biocompatible polymer is a biodegradable, biocompatible polymer.

19. A method for enhancing the formation of a solid, non-migratory coherent mass at a selected vascular site of a mammal which method comprises:

(a) placing a delivery device having an ejection port at a selected vascular site in a mammal;

(b) delivering through the ejection port of the delivery device a composition comprising a biocompatible polymer, a biocompatible solvent and optionally a contrast agent wherein the viscosity of the composition is at least about 150 cSt at 40°C.

20. The method according to Claim 19 wherein, prior to (b) above, a blood flow attenuating device is insert immediately upstream the ejection port of said catheter.

21. The method according to Claim 20 wherein said blood flow attenuating device is an inflatable microballoon which permits both normal and attenuated blood flow depending upon whether the microballoon is deflated or inflated.

22. The method according to Claim 19, wherein said composition has a viscosity of at least about 200 cSt at 40°C.

23. The method according to Claim 22, wherein said composition has a viscosity of at least about 500 cSt at 40°C.

24. The method according to Claim 23, wherein said composition has a viscosity of from about 500 to 5,000 cSt at 40°C.

25. The method according to Claim 19 wherein said composition has a migration distance from the point of injection of less than 25 mm.

26. The method according to Claim 19, wherein the concentration of biocompatible polymer employed in said composition is from 6 to 50 weight percent.

27. The method according to Claim 26, wherein the concentration of biocompatible polymer employed in said composition is from 8 to 30 weight percent.

28. The method according to Claim 19 wherein said biocompatible solvent is selected from the group consisting of ethyl lactate, dimethylsulfoxide, ethanol and acetone.

29. The method according to Claim 28 wherein said biocompatible solvent is dimethylsulfoxide.

30. The method according to Claim 19 wherein said contrast agent is a water insoluble contrast agent.

31. The method according to Claim 30 wherein said water insoluble contrast agent is selected from the group consisting of tantalum, tantalum oxide, tungsten and barium sulfate.

32. The method according to Claim 31 wherein said contrast agent is tantalum.

33. The method according to Claim 19 wherein said contrast agent is a water soluble contrast agent.

34. The method according to Claim 19 wherein said biocompatible polymer is a non-biodegradable, biocompatible polymer.

35. The method according to Claim 34 wherein said non-biodegradable, biocompatible polymer is selected from the group consisting of cellulose acetates, ethylene vinyl alcohol copolymers, hydrogels, polyacrylonitrile, polyvinylacetate, cellulose acetate butyrate, nitrocellulose, copolymers of urethane/carbonate, copolymers of styrene/maleic acid, and mixtures thereof.

36. The method according to Claim 35 wherein said biocompatible polymer is an ethylene and vinyl alcohol copolymer.

37. The method according to Claim 19 wherein said biocompatible polymer is a biodegradable, biocompatible polymer.

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